

EVALUATION REPORT

Applicant File Number: B1020
Report Number: B1020-1 Edition 6

Applicant: Mr. John Stahl, President
Preferred Solutions, Inc.
7918 Broadview Rd.
Cleveland, Ohio
44131

Edition 6: September 8, 2016
Issued by: Anthony Hicks, EIT
Reviewed by: Matt Lansdowne, P.Eng, M.Sc
Contents: Pages 1 through 6

Edition 6 supersedes and replaces Edition 5. Update to include Staycell® 302 Hybrid system tested in accordance with ASTM E-84 in the Tests section of this report.

Edition 5: April 20, 2016
Issued by: Anthony Hicks, EIT
Reviewed by: Matt Lansdowne, P.Eng, M.Sc
Contents: Pages 1 through 6

Edition 5 supersedes and replaces Edition 4. Update to QAI listing to include Staycell® 302 Hybrid system and Foamsulate™ 220 Hybrid system tested in accordance with ASTM E-84.

Edition 4: March 30, 2016
Issued by: Anthony Hicks
Reviewed by: Matt Lansdowne, P.Eng, M.Sc
Contents: Pages 1 through 6

Edition 4 supersedes and replaces Edition 3. Update to QAI listing to include Staycell® 302 Hybrid system as well as Foamsulate™ 220 Hybrid system base layers covered with Staycell ONE STEP® 255 on exposed surface for walls and roof and ceiling applications.

Edition 3: October 30, 2012
Issued by: Matt Lansdowne, EIT, M.Sc.
Reviewed by: Chris Bowness, P.Eng
Contents: Pages 1 through 5

Edition 3 supersedes and replaces Edition 2. Update to QAI listing to include Staycell® 275-2.0 and Staycell® 275-1.8 products ASTM E84 values. Update to QAI listing to include Staycell® 275 Hybrid system including Staycell® 275-2.0 or Staycell® 275-1.8 base layer component covered with Staycell ONE STEP® on exposed surface for walls and roof and ceiling applications.

Edition 2: February 27, 2012
 Issued by: Chris Scoville, M. Sc.
 Reviewed by: Chris Bowness, P.Eng
 Contents: Pages 1 through 4

Edition 2 supersedes and replaces Edition 1. Review and approval for change in formulation for Staycell® 255 product. Reviewed by Chris Scoville, approved by Chris Bowness. Quarterly scans updated to include new formulation.

Edition 1: June 17, 2011
 Issued by: Chris Scoville, M. Sc.
 Reviewed by: Chris Bowness, P.Eng
 Contents: Pages 1 through 3

Update to Initial Certification Application by Preferred Solutions, for Staycell® spray applied polyurethane foam insulation products. Update includes Spraycell® Hybrid System with Staycell® 265 base layer covered with Spraycell ONE STEP® on exposed surface.

APPLICABLE REQUIREMENTS:

ASTM E84-15 - "Standard Test Method for Surface Burning Characteristics of Building Materials".

UL 1715-97 "Standard for Fire Test of Interior Finish Material".

SUBJECT:

Staycell® 245-2.0 spray applied polyurethane foam insulation.

Staycell ONE STEP® 255 spray applied polyurethane foam insulation.

Staycell® 265 spray applied polyurethane foam insulation.

Staycell® 275-2.0 spray applied polyurethane foam insulation.

Staycell® 275-1.8 spray applied polyurethane foam insulation.

Staycell® 265 Hybrid System.

Staycell® 275 Hybrid System.

Staycell® 302 Hybrid Spray Foam Thermal Insulation and Air Barrier System.

Foamsulate™ 220 Hybrid Spray Foam Thermal Insulation and Air Barrier System.

	Manufacturing Location(s):	Contact Person
1)	Preferred Solutions, Inc. 7918 Broadview Rd. Cleveland, OH 44131	John Stahl Phone: 216-410-2273 Email: john.stahl@stayflex.com

CONDITIONS OF ACCEPTANCE:

1. Products must successfully pass all factory tests prior to being labeled with the QAI_{US} logo.
2. Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

MARKING METHODS:

Finished products are drummed, and labeled with the finished product information outlined in the listing agreement. The labeling identifies the components for application into installation equipment to spray the appropriate ratio forming the finished installed product.

FACTORY TESTS:

Tests are to be conducted on every production run. These tests at minimum require Viscosity, Weight of Liquid components A & B, Density of Foam, quarterly FTIR Scans, Annual Flame Spread.

DESCRIPTION:

The finished product is a two-part, sprayed Polyurethane foam insulation. The two parts, A & B, are supplied in liquid form to the jobsite, and sprayed in place to form a solid foam plastic insulation, adhering and sealing the walls, roofs and ceilings. The density, thermal resistance, and performance depend on the selected Preferred Solutions Staycell® and Foamsulate™ products below applied:

- Staycell® 245-2.0.
- Staycell ONE STEP® 255.
- Staycell® 265
- Staycell® 275-2.0.
- Staycell® 275-1.8.
- Staycell® 265 Hybrid System.
- Staycell® 275 Hybrid System.
- Staycell® 302 Hybrid System.
- Foamsulate™ 220 Hybrid System.

TESTS:

Tests outlined below were conducted by International Accreditation Service, Inc. accredited QAI Laboratories, Inc. Rancho Cucamonga, CA facility (TL-220), QAI Laboratories, Inc. Tulsa, OK facility (TL-282), and NGC Testing Services Buffalo, New York facility (TL-216).

All samples for testing were randomly selected by an independent third party, and confirmed of normal manufactured and labeled products.

TESTING	RESULT	TEST REPORT	REPORT CONCLUSION
ASTM E84-08 Staycell® 245-2.0	FSI ≤ 20 SDI ≤ 450 @ 4" Thickness + 2.0 pcf	QAI Test Report RJ0031-01A dated 2/11/2009	Staycell® 245-2.0 Meets current requirements for flame spread index and smoke developed index of ASTM E84-12.
ASTM E84-09 Staycell ONE STEP® 255	FSI ≤ 25 SDI ≤ 400 @ 4" Thickness + 2.0 pcf	QAI Test Report RJ1517-1 dated 9/6/2011	Staycell ONE STEP® Meets current requirements for flame spread index and smoke developed index of ASTM E84-12
ASTM E84-07 Staycell® 265	FSI ≤ 25 SDI ≤ 350 @ 4" Thickness + 2.0 pcf	QAI Test Report RJ0118-01 dated 3/20/2009	Staycell ® 265 Meets current requirements for flame spread index and smoke developed index of ASTM E84-12
ASTM E84-08 Staycell® 275-1.8	FSI ≤ 20 SDI ≤ 300 @ 2" Thickness + 1.8 pcf FSI ≤ 20 SDI ≤ 450 @ 4" Thickness + 1.8 pcf	QAI Test Report RJ0031-01A dated 2/11/2009	Staycell® 275-1.8 Meets current requirements for flame spread index and smoke developed index of ASTM E84-12.
ASTM E84-08 Staycell® 275-2.0	FSI ≤ 20 SDI ≤ 350 @ 2" Thickness + 2.0 pcf FSI ≤ 20 SDI ≤ 450 @ 4" Thickness + 2.0 pcf	QAI Test Report RJ0031-01A dated 2/11/2009	Staycell® 275-2.0 Meets current requirements for flame spread index and smoke developed index of ASTM E84-12.
UL 1715 Staycell ONE STEP® 255	Meets 15 Minutes Wall Only 4" Thickness	NGC Test Report RCB-1106 dated 11/28/2011	Maximum 4" Thickness on walls (2.0 pcf density) exposed without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.
UL 1715 Staycell ONE STEP® 255	Meets 15 Minutes Roofs and Ceilings Only 8" Thickness	NGC Test Report RCB-1105 dated 11/28/2011	Maximum 8" Thickness on Roofs and Ceilings (2.0 pcf density) exposed without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.

UL 1715 Staycell® 265 Hybrid System	Meets 15 Minutes Wall Only 5" Thickness	NGC Test Report RCB-1104 dated 9/12/2011	Maximum 4" Thickness Staycell® 265 base layer covered with 1" nominal thickness Staycell ONE STEP® 255 as the exposed surface on walls (2.0 pcf density) without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.
UL 1715 Staycell® 265 Hybrid System	Meets 15 Minutes Roofs and Ceilings Only 8 ½" Thickness	NGC Test Report RCB-1103 dated 9/12/2011	Maximum 8" Thickness Staycell® 265 base layer covered with ½" nominal thickness Staycell ONE STEP® 255 as the exposed surface on roofs and ceilings (2.0 pcf density) without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.
UL 1715 Staycell® 275 Hybrid System	Meets 15 Minutes Wall Only 5" Thickness	NGC Test Report RCB-1201 dated 9/21/2012	Maximum 4" Thickness Staycell® 275-1.8 or Staycell® 275-2.0 base layer covered with 1 inch nominal thickness Staycell ONE STEP® 255 as exposed surface on walls (2.0 pcf density) without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.
UL 1715 Staycell® 275 Hybrid System	Meets 15 Minutes Roofs and Ceilings Only 8 ½" Thickness	NGC Test Report RCB-1202 dated 9/21/2012	Maximum 8" Thickness Staycell® 275-1.8 or Staycell® 275-2.0 base layer covered with ½" nominal thickness Staycell ONE STEP® as exposed surface on roofs and ceilings (2.0 pcf density) without a thermal barrier meets current requirements of UL 1715 Fire Test of Interior Finish Material.
UL 1715 Staycell® 302 Hybrid System	Meets 15 Minutes Wall Only 4" Thickness	NGC Test Report RCB-1602 dated 2/24/2016	Maximum 3" Thickness Staycell® 302 base layer covered with 1" nominal thickness Staycell ONE STEP® 255 as exposed surface on walls meets current requirements for UL 1715 Fire Test of Interior Finish Material
UL 1715 Staycell® 302 Hybrid System	Meets 15 Minutes Roofs and Ceilings Only 8 ½" Thickness	NGC Test Report RCB-1601 dated 2/24/2016	Maximum 8" Thickness Staycell® 302 base layer covered with ½" nominal thickness Staycell ONE STEP® 255 as exposed surface on roofs and ceilings meets current requirements for UL 1715 Fire Test of Interior Finish Material
UL 1715 Foamsulate™ 220 Hybrid System	Meets 15 Minutes Wall Only 4" Thickness	NGC Test Report RCB-1602 dated 2/24/2016	Maximum 3" Thickness Foamsulate™ 220 base layer covered with 1" nominal thickness Staycell ONE STEP® 255 as exposed surface on walls meets current requirements for UL 1715 Fire Test of Interior Finish Material
UL 1715 Foamsulate™ 220 Hybrid System	Meets 15 Minutes Roofs and Ceilings Only 8 ½" Thickness	NGC Test Report RCB-1601 dated 2/24/2016	Maximum 8" Thickness Foamsulate™ 220 base layer covered with ½" nominal thickness Staycell ONE STEP® 255 as exposed surface on roofs and ceilings meets current requirements for UL 1715 Fire Test of Interior Finish Material

ASTM E-84-15 Foamsulate™ 220	FSI ≤ 10 SDI ≤ 250 @ 4" Thickness + 2.0 pcf FSI ≤ 10 SDI ≤ 195 @ 4" Thickness + 2.0 pcf	QAI Test Reports TJ2955-1 and TJ2955-2 dated June 3, 2015	Foamsulate™ 220 Meets current requirements for flame spread index and smoke developed index of ASTM E84-15.
ASTM E-84-15 Staycell® 302	FSI ≤ 10 SDI ≤ 250 @ 4" Thickness + 2.0 pcf FSI ≤ 10 SDI ≤ 195 @ 4" Thickness + 2.0 pcf	QAI Test Reports TJ2955-1 and TJ2955-2 dated June 3, 2015	Staycell® 302 Meets current requirements for flame spread index and smoke developed index of ASTM E84-15.

CONCLUSION:

Products were found to comply with applicable requirements and are acceptable for listing. Follow up inspections will be conducted by QAI at the Preferred Solutions, Inc. facility.

Issued :
By



Anthony Hicks, EIT
Project Manager

Reviewed :
By

Matt Lansdowne, P. Eng, M.Sc
Director of Engineering